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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/415,481	10/08/1999	ANDREW C. HSU	20864.00700	4880

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EXAMINER
ZAMANI, ALI A

ART UNIT	PAPER NUMBER
2674	

DATE MAILED: 01/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/415,481	HSU ET AL.	
	Examiner	Art Unit	
	Ali A. Zamani	2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 July 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *34,35,46-54,56-59 and 64-78* is/are rejected.

7)☐ Claim(s) *39-45,55 and 60-63* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 34-35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Aroyan et al. (US Pat. No. 6,163,313) in view of kent et al. (US Pat. No. 6,492,979 B1).

3. In regard to claims 34-35, Aroyan et al. a transparent capacitive touch sensing system (6) comprised of: a substantially transparent sensor which can capacitively sense a user's finger or conductive stylus when either are touching or in very close proximity to sensor (see col. 9, lines 38-40) and a sensing device for detecting capacitance changes on substantially transparent sensor (Fig. 5, col. 10, lines 21-45), a controller electronics (110) which is capable of various functions, like may excite the electrode pattern and measure the voltage (see Fig. 5) and as another option, the controller electronics (110) may support AC operation by driving the four electrode-pattern corners with an AC signal having a fixed voltage amplitude, (see Fig. 12) for detecting capacitance changes on substantially transparent sensor which by performing these AC functions are also known as capacitive touchscreen controllers (col. 9, lines 21-43). Aroyan et al. also teach that the components of the touchscreen (105) are substantially transparent so that the two

dimensional graphics or data projected by the CRT face (150) is seen through the touchscreen (105), for the substantially transparent sensor is disposed on a substrate (200) which the substrate may be accordingly constructed from glass, plastic, or from other transparent material and alternatively, if the resultant product is to be an opaque sensor, then the substrate (200) may be glass, rigid plastic, or various types of printed circuit board materials, or a metal having a previously applied insulating layer (see col. 10, lines 21-29). Aroyan et al. further teach a flexible film (215) having a conductive coating (220) which reside on the underside of the flexible film (215) and if the sensor which is to be transparent, then the conductive coating (220) must also be transparent or substantially transparent (Fig. 5, col. 11, lines 7-24). Aroyan et al. Substantially teach the above claims limitation except for teaching a "sensing device for detecting capacitance changes on the transparent sensor trace array". However, Kent et al. Teach a method for discriminating against false touches in a touchscreen system is provided and the system is designed to confirm a touch registered by one touch sensor with another touch sensor, preferably of a different sensor type (see the abstract) devices and the basis of the invention lies in the ability to confirm a touch registered by one touch sensor with another touch sensor, if the touch is confirmed, the touch can be acted. Thus, it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the method of teaching of Kent et al. In Aroyana et al. teaching for assuring long operating life of a transparent conductive touch sensing system.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 46-54, 56-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aroyan et al. In view of Muroi (US Pat. No. 5,021,640).

In regard to claims 46-54 and 56-59 , Aroyan et al. are discussed above. Aroyon et al. substantially teach the above claimed limitations except for teaching a "substantially transparent two-dimensional sensor". However, Muroi teaches a bar code reading device which comprises a transparent touch sensor section (20) formed on the liquid crystal display section (10) which controlled by means of liquid crystal display controller (31) disposed inside main body (1) and a light beam reflected from article (7) can pass through LCD panel (10) and touch sensor panel (20) includes a plurality of touch sensor (21) which are assigned on a one-to one basis to the keys (matrix) (Figs 1-4, col. 1, lines 50-67). Thus, it would have been obvious to one of ordinary skill in the art to modify the touch panel of Aroyan et al. with touch panel of Muroi to provide a touch sensor system with uniform density of sensor traces.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 64-76 and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colgan et al. (US Pat. No. 6,483,498 B1).

In respect to claims 64-76 and 78, Colgan teach a liquid crystal display having a top polarizer layer (24); and a transparent touchpad disposed on top polarizer layer (24) including a plurality of first conductors disposed along a X axis directly on said top polarizer; and a plurality of second conductors disposed along a Y axis and insulated from plurality of first conductors disposed along X axis (see the abstract). Colgan et al. also disclose an adhesive (44) which attached conductive layer (26) on polarizer (24) and a transparent conductive layer (32) is disposed on color filter plate (18). Colgan et al. Further teach that the polarizer provides a contact surface such that a touched position on the polarizer causes contact between the first conductive layer and the second conductive layer thereby identifies a location of the touched position by applying a first voltage gradient being provided across the first conductive layer while the second conductive layer is employed as a sensor layer for touched position, and a second voltage gradient is provided orthogonally to the first voltage gradient across the second conductive layer while the first conductive layer is employed as the sensor layer for the touched position. Thus, it

would have been obvious to one of ordinary skill in the art at the time of the invention by using maximum transparency in order the sensor system should have a uniform density.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claim 77 is rejected under 35 U.S.C. 102(e) as being anticipated by Harkin (US Pat. No. 6,327,376 B1).

In regard to claim 77, Harkin discloses a fingerprint sensor having a top layer; and a transparent touchpad (35) disposed on top layer, including a plurality of conductors disposed along at least one axis directly on top layer which function as claimed (see the abstract).

9. Claims 39-45, 55, 60-63 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kent et al. Is made of record to show a type of touch sensing system.

Conclusion

Applicant's arguments with respect to claims 34-35, 46-54 and 57-59 have been considered but are moot in view of the new ground(Kent et al.) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Zamani whose telephone number is (703) 308-6414. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerepe, can be reached on (703) 305-4709.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washingto, DC 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Ali Zamani

January 10, 2003

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600